**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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Ex parte CHANDRA S. CHEKURI
LAWRENCE M. DRABECK
and YIHAO L. ZHANG

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Appeal No. 2005-2704
Application No. 09/628,378

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ON BRIEF

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Before BARRY, BLANKENSHIP, and MACDONALD, ***Administrative Patent Judges.***
MACDONALD, ***Administrative Patent Judge.***

***DECISION ON APPEAL***

This is a decision on appeal from the final rejection of claims 1-6, 8-9, and 23-25. Claims 7 and 10-22 have been indicated as containing allowable subject matter.[1]

***Invention***

Appellants' invention relates to a method, apparatus, and article of manufacture for designing or adjusting a wireless network.

In accordance with one aspect of the invention, an optimization process is applied to a set of information characterizing a wireless network. The optimization process includes at least a pre-frequency-assignment optimization stage, which is applied prior to assignment of frequencies to one or more communication channels of the wireless network. The pre-frequency-assignment optimization stage may be configured to utilize a derivative-based optimization of a specified objective function, and may determine a particular network configuration for specified values of network capacity and network coverage. An output of the optimization process is utilized to determine one or more operating parameters of the wireless network, such as a base station transmit power or antenna orientation.

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[1] The rejection of claim 7 was withdrawn in the Examiner's Answer at page 2, section (6).

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. A processor-implemented method for providing a desired level of performance for a wireless network, the method comprising the steps of:

applying an optimization process to a set of information characterizing the network, the optimization process comprising at least a pre-frequency-assignment optimization stage, the pre-frequency-assignment optimization stage being applied prior to assignment of frequencies to one or more communication channels of the wireless network; and

utilizing an output of the optimization process to determine at least one operating parameter of the wireless network.

***References***

The references relied on by the Examiner are as follows:

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|---|---|---|
| Markus | 5,561,841 | Oct. 1, 1996 |
| Faruque | 6,128,497 | Oct. 3, 2000 (Filed Mar. 10, 1998) |

***Rejections At Issue***

Claims 1-4, 8, 9, and 23-25 stand rejected under 35 U.S.C. § 102 as being anticipated by Markus.

Claim 6 stands rejected under 35 U.S.C. § 103 as being obvious over Markus.

Claim 5 stands rejected under 35 U.S.C. § 103 as being obvious over the combination of Markus and Faruque.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.[2]

***OPINION***

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated **infra**, we reverse the Examiner's rejection of claims 1-4, 8, 9, and 23-25 under 35 U.S.C. § 102; and we reverse the Examiner's rejection of claims 5 and 6 under 35 U.S.C. § 103.

**I. Whether the Rejection of Claims 1-4, 8, 9, and 23-25 Under 35 U.S.C. § 102 is proper?**

It is our view, after consideration of the record before us, that the disclosure of Markus does not fully meet the invention as recited in claims 1-4, 8, 9, and 23-25. Accordingly, we reverse.

[2]Appellants filed an appeal brief on September 13, 2004. Appellants filed a reply brief on March 14, 2005. The Examiner mailed an Examiner's Answer on January 11, 2005.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See In re King**, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and **Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

With respect to independent claim 1, Appellants argue at page 5 of the brief:

> Since these post-processing programs are applied after assignment of frequencies to communication channels of the system, they cannot reasonably be characterized as anticipating the claimed pre-frequency-assignment optimization stage of claim 1.

The Examiner responds at page 8 of the answer:

> Independent claims 1 and 23-25 are very broad; therefore the Examiner interprets the assignment of frequencies as distributing designated frequencies to communication channels during system turn-up (sic).

Appellants then argue at page 3 of the reply brief:

> There is no teaching or suggestion in Markus to the effect that the frequency scheme of the network is altered as a result of the particular optimization processes described therein.

We agree with Appellants. Our review of Markus finds that the initial optimization process includes frequency allocation (col. 5, lines 61-64). Thus, contrary to the Examiner's position, there is no pre-frequency-assignment optimization stage in Markus.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 102.

**II. Whether the Rejection of Claim 6 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claim 6. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can

satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to dependent claim 6, Appellants state at page 8 of the brief, "claim 6 is believed allowable for at least the reasons identified above with regard to independent claim 1." Thus, we find that claim 6 stands or falls with claim 1.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the reason noted above with respect to claim 1.

**III. Whether the Rejection of Claim 5 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claim 5. Accordingly, we reverse.

With respect to dependent claim 5, we note that the Examiner has relied on the Faruque reference solely to teach "a frequency reuse factor greater than one" [answer, page 6]. The Faruque reference in combination with the Markus fails to cure the deficiencies of Markus noted above with respect to claim 1. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

***Conclusion***

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 102 of claims 1-4, 8, 9, and 23-25; and we have not sustained the rejection under 35 U.S.C. § 103 of claims 5 and 6.

***REVERSED***

LANCE LEONARD BARRY )
Administrative Patent Judge )
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HOWARD B. BLANKENSHIP ) BOARD OF PATENT
Administrative Patent Judge ) APPEALS AND
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ALLEN R. MACDONALD ) INTERFERENCES
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